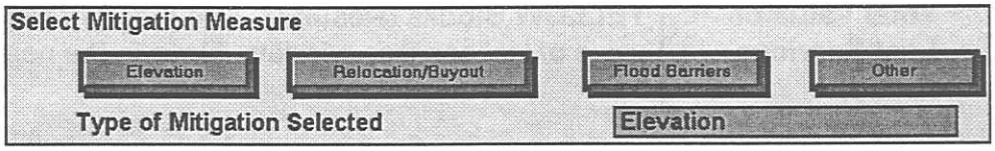
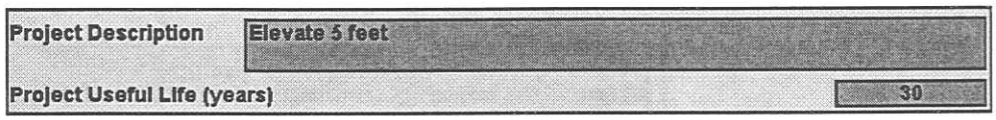
MITIGATION PROJECT DATA

Select Mitigation Measure



With the mouse, click on the **Elevation** button. The program will display this choice in the purple cell.



Project Description

PINK Block (Information Only). Enter **Elevate 5 feet**. Move to the next entry.

Project Useful Life

GREEN Block (Data Input): Enter **30** as the years of useful life expected from this mitigation measure. Move to the next entry.

Mitigation Effectiveness Estimates

Enter Effectiveness Estimates for the Mitigation Measure

Mitigation Measure	100% Effective to Depth	0% Effective at Depth
Elevation	4	N/A
Relocation/Buyout	N/A	N/A
Flood Barriers		
Other		

Enter **4** in the **Elevation** row under the **100% Effective to Depth** column header (see **Chapter 6, Benefit-Cost Program: Level One Analysis** for a discussion of mitigation project effectiveness). The program displays **N/A** (not applicable) in the **0% Effective at Depth** column for the **Elevation** row because this is calculated automatically from the building depth-damage function.

N/A also appears in the **Relocation/Buyout** row because such measures are assumed to be 100% effective at all depths. Although values may appear in other rows (from previous uses of the program), the program only "reads" (uses) the values in the row which corresponds to the mitigation measure type selected.

MITIGATION COSTS

Mitigation Project Cost (excluding relocation costs)	$40,000
Base Year of Costs	1994
Annual Maintenance Costs ($/year)	$500
Present Value of Annual Maintenance Costs ($)	$6,205
Relocation Costs for Mitigation Project	
Relocation Time Due to Project (months)	2.0
Rental Cost during Occupant Relocation ($/sf/month)	$2.00
Rental Cost during Occupant Relocation ($/month)	$3,000
Other Relocation Costs ($/month)	$500
Total Relocation Costs	$7,000
Total Mitigation Project Costs	$53,205

Mitigation Project Cost

GREEN Block (Data Input). Enter **40000** (forty thousand) as the mitigation project cost, excluding relocation costs. Move to the next entry.

Base Year of Costs

PINK BLOCK (Information Only). Enter **1994**. Move to the next entry.

ANNUAL MAINTENANCE COSTS ($/year)

GREEN Block (Data Input). Enter **500** (five hundred) as the annual maintenance costs. Move to the next entry.

Present Value of Annual Maintenance Costs

YELLOW Block (Result). The program calculates **$6,205** as the present value of annual maintenance costs. This calculation is based on the annual maintenance costs, the project useful lifetime, and the discount rate. Move to the next entry.

RELOCATION COSTS FOR MITIGATION PROJECT

In this section, the time and costs associated with occupant relocation during the construction of the mitigation project are estimated.

Relocation Time Due to Project

GREEN BLOCK (Data Input): Enter **2** for two months of relocation time necessary for the mitigation project. Move to the next entry.

Rental Cost During Occupant Relocation

GREEN Block (Data Input): Enter **2.00** for $2.00 per square foot per month as the rental cost during occupant relocation for the mitigation project. Move to the next entry.

YELLOW Block (Results): The program displays **$3,000**, as the monthly rental cost incurred during occupant relocation for the mitigation project. Move to the next entry.

Other Relocation Costs ($/month)

GREEN Block (Data Input). Enter **500** (five hundred) dollars in other relocation costs per month. Move to the next entry.

Total Relocation Costs

YELLOW Block (Result). The program displays **$7,000** as the total relocation costs for the mitigation project. Move to the next entry.

TOTAL MITIGATION PROJECT COSTS

YELLOW Block (Result): The program displays **$53,205** as the total mitigation project costs. This total includes the mitigation project costs, the present value of the annual maintenance costs, and the relocation costs for the project. Move to the next entry.

FLOOD HAZARD

Flood Data

Data from Flood Information Studies (FIS) and Flood Insurance Rate Maps (FIRM)

Flood Frequency (years)	Discharge (cfs)	Elevation (ft)
10	279,000	5.8
50	351,000	7.4
100	377,000	8.0
500	444,000	9.5

GREEN Blocks (Data Input). Complete the **Flood Data** chart with the information as shown above, for **Flood Frequency**, **Discharge** and **Elevation**. These data, along with the **Zero Flood Depth Elevation** of the facility under evaluation determine the extent of flood risk at the site. For more information about how flood hazards are modeled in the program, see **Chapter 7, Benefit-Cost Program: Flood Hazard Risk**.

To view the calculated flood estimates, move down on the flood hazard page with the arrow keys or mouse.

You have now completed the LEVEL ONE (Minimum Data) benefit-cost analysis data entry process.

BENEFIT-COST RESULTS

Use the mouse to highlight **Results** on the menu, and then, while holding down the left button, move the mouse until **Benefit-Cost Results** is highlighted. The program will then move to the **Results** screen.

Present Value Coefficient

Discount Rate	7.00%
Project Useful Life (years)	30
Present Value Coefficient	12.41

YELLOW Block (Result). The program displays **12.41** as the present value coefficient. The **Present Value Coefficient** is the present value of $1.00 per year in benefits received over the project useful lifetime. The **Present Value Coefficient** is calculated from the **Project Useful Lifetime** and the **Discount Rate**, which are carried over, **PURPLE Blocks (Carry Over)**, from the **LEVEL ONE Data** entry page and displayed here for reference.

Summary of Expected Damages and Benefits

Expected Damages and Benefits Table

	Expected Annual Damages Before Mitigation	Expected Annual Damages After Mitigation	Expected Annual Benefits	Present Value of Annual Benefits
Building Damages	$1,281	$9	$1,272	$15,779
Contents Damages	$641	$5	$636	$7,890
Displacement Costs	$114	$3	$110	$1,369
Business Income Lost	$43	$0	$42	$526
Rental Income Lost	$21	$1	$20	$249
Gov't Services Lost	$883	$6	$877	$10,879
Total Losses	$2,982	$25	$2,957	$36,691

YELLOW Blocks (Results). For each category listed in the table above, the program displays the calculated results: **Expected Annual Damages Before and After Mitigation, Expected Annual Benefits,** and the **Present Value of the Annual Benefits**. See **Chapter 9, Benefit-Cost Program: Results**, for a detailed discussion of these results and how to interpret them.